UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

HC

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/032,863	03/02/98	GRIGOR G	0100.01117

LM01/0302

TIMOTHY A MARKISON
MARKISON & RECKAMP
SUITE 1015
175 WEST JACKSON BLVD.
CHICAGO IL 60604

EXAMINER	
NGUYEN,K	
ART UNIT	**PAPER NUMBER**
2774	6
DATE MAILED:	03/02/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/032,863	GRIGOR ET AL.	
	Examiner	Art Unit	
	Kevin M. Nguyen	2774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

1)☒ Responsive to communication(s) filed on *01/19/2000* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)☐ All b)☐ Some * c)☐ None of the CERTIFIED copies of the priority documents have been:

1.☐ received.

2.☐ received in Application No. (Series Code / Serial Number) _____ .

3.☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

14) ☒ Notice of References Cited (PTO-892)
15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
16) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
17) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
18) ☐ Notice of Informal Patent Application (PTO-152)
19) ☐ Other: .

DETAILED ACTION

1. This Office Action is in response to the application's amendment received on 01/19/2000. The amendment to the claims and applicant's remarks were considered, with the results as set forth in the following:

Claim Rejections - 35 USC § 112

2. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 1-13 provide for the use of "a/the coupling controller", but, since the claims do not set forth any steps involved in the method/process, they are unclear what method/process applicant is intending to encompass. The claims are indefinite where they merely recites a use without any active, positive steps delimiting how these use are actually practiced.

Claims 1-13 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

The examiner examines the application based on the best understood of the claim language.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-13 and 24-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kou (U.S. Patent No. 5,874,928) in view of Zenda (U.S. Patent No. 4,980,678).

As to claims 1, 24, and 33, Kou teaches "method and apparatus for driving a plurality of displays simultaneously" which includes host computer consists of processor that make up **the coupling controller,** and convert data stream into first set of video signals (115) (see figure 4, column 10, lines 12-22). Accordingly, system 10 corresponds to video graphics processing circuit, host computer 12 consists of a processing unit, display memory 36 corresponds to memory and digital storage medium, frame buffer 48 corresponds to memory stores programming instructions of the claims (figure 1, column 4, lines 64-67), which includes:

a) host computer 12 to receive, manipulate, and store the graphics data is ready to be converted into video signals which can be used to drive the display 18a-18n CRT and LCD (figure 1, column 6, lines 20-26). Accordingly, display 18a-18n corresponds to multiple display, host computer 12 corresponds to computing system of claims. The concept taught herein maybe extended to drive any number and any type of display (column 6, lines 29-30) corresponding to the claimed display preferences.

b) the two displays to be refreshed at two independent and optimal refresh rates (column 8, lines 43-44), a 32 bit data word form butter 38 may be converted into a sequential pixels on the display screen (figure 1, column 6, lines 53-55) corresponds to the revolution of claim. the concepts taught herein may be extended to drive any type of displays (column 6, lines

30), at least partially, on the observation that the shortcomings of the prior art display (column 3, lines 30-31) corresponds to display preferences can be fulfilled in observance of configure properties of the computing system of claim.

c) the exact configuration of interface 30 will depend upon the particular host computer bus 14 used in the system 10 (figure 1-2, column 5, lines 49-51) corresponding to the claimed when the display preference can be fulfilled, configuring the computing system and the at least one of the multiple display in accordance with the display preferences.

As to claim 2, Zenda (4,980,678) teaches "display controller for CRT/ Flat panel display apparatus" which includes keyboard 16 for inputting palette data and various commands (column 3, lines 52-53) and CPU 1 executes rewrite processing of palette 13 in accordance with an application program (figure 1, column 5, lines 36-39) corresponding to the claimed a user interface of the computing system and an application running on the computing system.

As to claim 3, Kou teaches:

i) this type of panel is termed a Dual Scan panel since the two panel are scanned simultaneously (column 1, lines 65-67) the data displayed on the LCD was directly derived by capturing the sequential data stream targeted for the CRT and converting the data to LDC format (column 2, lines 3-6) corresponds to display and image on more than one of the multiple displays.

ii) the display controller 16 simultaneously drives two separate displays (column 6, lines 24-25) corresponding to the claimed displaying separate image on each of the multiple displays.

iii) the dithering pattern was different for the two halves of the screen, thus creating an inferior display (column 9, lines 27-29) corresponding to the claimed display a portion of the

image on one of the multiple displays and displaying the image on another one of the multiple displays.

iv) allows the two displays to be refreshed at two independent and optimal refresh rates (column 8, lines 43-44) corresponding to the claimed providing different refresh rates for at least two of the multiple displays.

v) there are two displays with one display being a CRT display and the other display being an LCD (column 5, lines 9-11) corresponding to the claimed providing different resolutions for at least two of the multiple displays.

vi) the display controller 16 simultaneously drives two separate displays (column 6, lines 24-25) video signals (column 6, lines 23) correspond to the claimed selecting a particular one of the multiple displays to display a particular type of image.

vii) the dithering pattern was different for the two halves of the screen, thus creating an inferior display (column 9, lines 27-29). Accordingly, two halve of the screen corresponds to first portion and second portion of the image of the two display.

As to claims 4-6, 25, and 34, Zenda (4,980,678) teaches step 75, 77, 79, and 81 in figure 11A, step 83, 85, 87, and 89 in figure 11B, CPU 1 rewrites the content of palette 13 to be designated palette data (figure 6A, column 5, lines 15-16) corresponding to the claimed reconfigure display preferences can be fulfilled.

As to claims 7, 26, and 35, Kou teaches display controller 16 comprise host interface 30 which is the graphics data is ready to be converted into video signals which can be used to drive the display 18a-18n (figure 1 and figure 2, column 6, lines 22-24). Accordingly, display controller 16 corresponds to display controller, graphics data corresponds to display data, and display 18a-18n corresponds to multiple displays of claims.

As to claims 8, 27, and 36, Zenda (4,980,678) teaches CPU 1 reads out display data from VRAM 15 (figure 1, column 5, lines 47-48) in accordance with palette 13 whose content is rewritten with PDP palette data, thereby displaying data on PDP 21 (figure 1, column 5, lines 49-51). Accordingly, VRAM 15 corresponds to screen memory, rewrite corresponds to retrieve, PDP 21 corresponds to one display of the claims.

As to claims 9, 28-32 and 37-41, Zenda (4,980,678) teaches CPU 1 readouts display data from VRAM 15 (column 5, lines 47-48), in step 70, CPU 1 load default value D.CRT of CRT palette data and default value D.PDP of PDP palette data stored in BIOS.ROM 17 into CRT palette data buffer 5 and PDP palette data buffer 7, respectively (figure 1, figure 11A, column 6, lines 61-65) CRT 19 controller (CRTC) 25 selectively display-drives CRT 19 and PDP 21 (column 3, lines 45-46) corresponding to the claimed display drivers writes the separate display data to screen memories.

6. Claims 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kou (U.S. Patent No. 5,874,928) and Zenda (U.S. Patent No. 4,980,678) as applied to claims 1-13 and 24-41 above, and further in view of Zenda (U.S. Patent No. 5,559,525).

Kou and Zenda (4,980,678) teaches all of the limitation except for the coupling controller. However, Zenda (5,559,525) discloses first display controller 87 (figure 3A, column 7, lines 45) and outputs data to be displayed on the color LCD panel 91 (figure 3A column 7, lines 46-67), the second display controller 109 and outputs data to be displayed on the color CRT 107 (figure 3A, column 9, lines 13-15). It would have been obvious to one of ordinary skill in the art the time the invention was made to utilize the coupling controller taught by Zenda (5,559,525) for the display controller taught by Kou because this would provides refresh rates which is optimized for viewing quality on a plurality of display.

As to claim 14, Zenda (5,559,525) teaches a portable computer includes optional display board can be connected can use CRT display units (see column 2, lines 32-34), capable of selectively displaying image data supplied from **two or more display controllers** (column 1, lines 10-14) corresponds to **the coupling controllers, video graphics card is small in IC chip of very display controller**;

a VRAM 11 stores display data to be displayed in color on a color CRT display unit 13 or a color LCD panel 15 (figure 26, column 1, lines 30-33) VRAM corresponds to screen memory of the claims;

analog switch 97 receives the control signals LP, FP, PCLK, and WCLK from the first display controller 87, and outputs them (figure 3A, column 8, lines 20-22). Accordingly, analog switch 97 corresponds to coupling module,

the selector 113 is connected to the first display controller 87 by the feature connector 103, and to the color LCD controllers 95 by the Z connector 105 (figure 3A, column 9, lines 27-29) corresponds to coupling controller of the claimed;

outputs display data P7-0 to be displayed on the color LCD panel 91 and also on the color CRT display unit 89 (figure 3A, column 7, lines 47-49). Accordingly, color panel 91 and CRT display unit 89 corresponds to receive display preferences of the claimed;

entire configuration of the computer (column 6, lines 45) corresponding to the configuration properties of the claimed;

CPU 1 reads out display data from VRAM 15 (figure 1, column 5, lines 47-48) in accordance with palette 13 whose content is rewritten with PDP palette data, thereby displaying data on PDP 21 (Zenda 4,980,678, figure 1, column 5, lines 49-51). Accordingly, VRAM 15 corresponds to screen memory, rewrite corresponds to retrieve, PDP 21 corresponds to one display of the claim.

As to claims 15-17 and 19, Zenda (5,559,525) teaches display data signal can be output by connected first display controller 87 and second display controller 109 through RAMDAC 111' and selector 113' (see figure 3B) corresponding to the claim the plurality of display controllers and the at least on display .

As to claims 18 and 20, Zenda (5,559,525) teaches first display controller for CRT, and second display controller for flat panel (see figure 25 and 27, column 1, lines 17 and column 2, lines 26) corresponding to the claimed **the coupling controller**.

As to claim 21, Zenda (5,559,525) teaches the first display controller 87 is incorporated (figure 3A, column 7, lines 45) and outputs display data P7-0 to be connected RAMDAC 93 and displayed on the color LCD panel 91 (figure 3A column 7, lines 46-67), the second display controller 109 outputs display data to be connected RAMDAC 111 and displayed on the color CRT display unit 107 (figure 3A, column 9, lines 13-15). Accordingly, RAMDAC corresponds to screen memory of the claims.

As to claim 22, Zenda (5,559,525) teaches the first display controller 87 outputs display data 'LP, FP' , 'FR, P7-0', 'PCLK' to be connected RAMDAC 111 and SELECTOR 113 on the color CRT 117 (figure 3A) corresponds to the third display of the claims.

As to claim 23, Zenda (U.S. Patent 5,559,525) teaches the first display controller 87 is incorporated (figure 3A, column 7, lines 45) and outputs display data P7-0 to be connected RAMDAC 93 and displayed on the color LCD panel 91 (figure 3A column 7, lines 46-67), the second display controller 109 outputs display data to be connected RAMDAC 111 and displayed on the color CRT display unit 107 (figure 3A, column 9, lines 13-15). Accordingly, RAMDAC corresponds to screen memory of the claims.

Response to applicant's remarks

7. Applicant argues that applicant's invention provides **the coupling controller**; whereas the prior art, the Kou's and Zenda (4,980,678)'s invention does not disclose; but, another prior art, the Zenda (5,559,525)'s invention disclose **the coupling controller**. These arguments are not persuasive because Kou's and Zenda (4,980,678)'s invention discloses data stream convert data stream into first set of video signals (115) (see figure 4, column 10, lines 12-22), display refresh and reconfiguration.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent No. 6,020,863 of Taylor is made of record as describing a related **the coupling controller and a video graphic card.** (see attached form PTO-892).

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Nguyen whose telephone number is (703) 305-6209. The examiner can normally be reached on weekdays from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-9051.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Kevin M. Nguyen

February 17, 2000

RICHARD A. HJERPE
SUPERVISORY PATENT EXAMINER
GROUP 2700